

REMARKS

This paper responds to the Office Action mailed on March 10, 2006.

Claims 1 and 4 are amended, claims 10-26 and 34-58 are canceled without prejudice or disclaimer, and claims 59-64 are added; as a result, claims 1-9, 27-33, and 59-64 are now pending in this application. The amendments to the claims are fully supported by the specification as originally filed. No new matter is introduced. Applicant respectfully requests reconsideration of the above-identified application in view of the amendments above and the remarks that follow.

Support for the amendments to claims 1 and 4 may be found in the specification, for example, on page 12, lines 1-8 and Figures 4, 6, and 7. Support for claims 59-61 may be found in the specification, for example, on page 12, lines 1-8, Figures 4, 6, and 7, and page 15, lines 1-4. Support for claim 62 may be found in the specification, for example, on page 14, lines 4-5. Support for claims 63 and 64 may be found in the specification, for example, on page 16, lines 3-10.

In response to the restriction requirement mailed 7 January 2005, Applicant elected claims 1-9 and 27-45. In response to the restriction requirement mailed 1 November 2005, Applicant elected claims 1-9. In the Final Office mailed 10 March 2006 in response to Applicant's election of claims, the Examiner has examined claims 1-9 and 27-33. Therefore, claims 1-9 and 27-33 are currently pending examination in the instant application. In light of the instant Final Office Action and the restriction requirements of record, Applicant cancels claims 10-26 and 34-58, without prejudice or disclaimer, and respectfully reserves the right to reintroduce them in one or more divisional applications at a later date.

Examiner Interview

Applicant's representative wishes to thank Supervisor Examiner, Carl Whitehead Jr., for clarifying the status of claims 27-33, which are properly, currently pending examination, since the current Office Action includes an examination of these claims.

In the Specification

The specification is amended to update the status of the patent application from which the instant application claims priority. No new matter is introduced.

The specification is amended with the paragraphs beginning on page 3, line 22 – page 5, line 23, including the heading Summary but before the heading Brief Description of the Drawings, being deleted. The specification is amended with paragraphs inserted beginning on page 8, line 26 before the original paragraphs beginning on page 8, line 26. The inserted paragraphs are from the specification as originally filed beginning on page 3, line 23 – page 5, line 23. No new matter is introduced.

Information Disclosure Statement

Applicant submitted an Information Disclosure Statement and a 1449 Form on November 25, 2003. Applicant notes that the first reference on page 3 of 3, “Shin-Etsu Connectors – GB-Matrix Type” has not been initialed. Applicant respectfully requests that an initialed copy of the 1449 forms be returned to Applicants' Representatives to indicate that the cited references have been considered by the Examiner.

§102 Rejection of the Claims

Claims 1-4, 6, 8, 9, 27-29, and 31-33 were rejected under 35 U.S.C. § 102(e) for anticipation by Lin (U.S. 6,103,552). Applicant traverses these grounds of rejection of these claims.

Applicant reserves the right to swear behind Lin at a later date.

With respect to claim 1, Applicant cannot find in Lin a disclosure, a teaching, or a suggestion of a method that includes forming an array of conductive elements within an adhesive to a level to allow the adhesive to contact a support to attach a die to the support, as recited in amended claim 1. Lin's figures show the solder bumps, such as solder bumps 12, 71, and 81, extending above polymeric encapsulation material, such as 10, 51, and 80. These figures and corresponding discussion, indicate that the polymeric encapsulation material does not act to attach the underlying structure to another structure by contacting the other structure. Therefore, Applicant submits that Lin does not teach or suggest all the elements of claim 1 and that Lin does

not anticipate claim 1.

Thus, Applicant submits that claim 1 is patentable over Lin for at least the reasons stated above. Claims 2 and 3 depend on claim 1. Thus, Applicant submits that claims 2 and 3 are patentable over Lin for at least the reasons discussed with respect to claim 1.

For reasons similar to those discussed above with respect to claim 1, Applicant submits that claim 4 is patentable over Lin. Claims 6, 8, and 9 depend on claim 4. Thus, Applicant submits that claims 6, 8, and 9 are patentable over Lin for at least the reasons discussed herein.

With respect to claim 27, Applicant cannot find in Lin a disclosure, a teaching, or a suggestion of a method that includes applying an adhesive layer that has an array of conductive elements formed within the adhesive layer to a first side of a finished wafer, where the array of conductive elements is formed in the adhesive prior to applying the adhesive to the finished wafer, as recited in claim 27. As can be seen in Lin's Figures 5, 8, 11a, and 11b, Lin's method includes forming vias in an encapsulation layer 51, which can then be filled with a conductive material. As can be seen in Lin's Figures 13, Lin includes a method that forms a conductive post 46 and then forms an encapsulation layer having a thickness less than the height of post 46 (*See Lin column 8, lines 1-9*). Therefore, Applicant submits that, since Lin does not disclose, teach, or suggest forming an adhesive layer with an array of conductive elements formed therein and then applying the adhesive layer having the array of conductive elements to a finished wafer as recited in claim 27, Lin does not disclose, teach, or suggest all the elements of claim 27.

Thus, Applicant submits that claim 27 is patentable over Lin for at least the reasons stated above. Claims 28, 29, and 31-33 depend on claim 27. Thus, Applicant submits that claims 28, 29, and 31-33 are patentable over Lin for at least the reasons discussed with respect to claim 27.

Applicant respectfully requests withdrawal of these rejections of claims 1-4, 6, 8, 9, 27-29, and 31-33, and reconsideration and allowance of these claims.

First §103 Rejection of the Claims

Claim 30 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Lin. Applicant traverses these grounds of rejection of these claims.

Claim 30 depends on claim 27. Applicant submits that claim 27 was shown to be patentable over Lin as discussed above. Therefore, since claim 30 depends on claim 27, Applicant submits that claim 30 is patentable over Lin for at least the reasons discussed above.

Applicant respectfully requests withdrawal of these rejections of claim 30, and reconsideration and allowance of this claim

Second §103 Rejection of the Claims

Claim 5 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Lin in combination with Kim et al. (U.S. 6,903,451). Applicant traverses these grounds of rejection of these claims.

Applicant reserves the right to swear behind Kim et al. (hereafter Kim) at a later date.

Applicant cannot find in the combination of Lin and Kim, as proffered in the Office Action, a teaching or a suggestion of a method that includes filling an array of openings in an adhesive with an electrically conductive material to a level to allow the adhesive to contact a support to attach a die to the support, as recited in claim 4. Applicant submits that the combination of Lin and Kim, as proffered in the Office Action, does not teach or suggest all the elements of claim 4 and that claim 4 is patentable over Lin in view of Kim for at least the reasons discussed above with respect to claim 4. Claim 5 depends on claim 4. Therefore, Applicant submits that claim 5 is patentable over Lin in view of Kim for at least the reasons stated herein.

Applicant respectfully requests withdrawal of these rejections of claim 5, and reconsideration and allowance of this claim.

Third §103 Rejection of the Claims

Claim 7 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Lin in combination with Okuno et al. (U.S. 6,063,646). Applicant traverses these grounds of rejection of these claims.

Applicant reserves the right to swear behind Okuno et al. (hereafter Okuno) at a later date.

Applicant cannot find in the combination of Lin and Okuno, as proffered in the Office Action, a teaching or a suggestion of a method that includes filling an array of openings in an

adhesive with an electrically conductive material to a level to allow the adhesive to contact a support to attach a die to the support, as recited in claim 4. Applicant submits that the combination of Lin and Okuno, as proffered in the Office Action, does not teach or suggest all the elements of claim 4 and that claim 4 is patentable over Lin in view of Okuno for at least the reasons discussed above with respect to claim 4. Claim 7 depends on claim 4. Therefore, Applicant submits that claim 7 is patentable over Lin in view of Okuno for at least the reasons stated herein.

Applicant respectfully requests withdrawal of these rejections of claim 7, and reconsideration and allowance of this claim.

New Claims

New independent claim 59 includes all the elements of claim 4 with additional features. Claims 60-64 depend from claims 59. Applicant respectfully requests consideration and allowance of claims 59-64.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (612) 371-2157 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

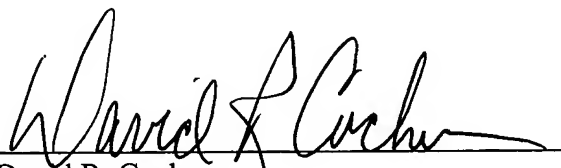
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Date 12 June 2006

By



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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 12 day of June, 2006

Name

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